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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,271	03/21/2001	Shen Ye	10467.51US01	3973

7590 08/27/2003

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EXAMINER	
LEE, BENNY T	
ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES DEPARTMENT OF COMMERCE
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09/814,271

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER NUMBER
	12

DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 30 Jan 2003 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire three (3) month(s), ____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☒ Notice of Art Cited by Applicant, PTO-1449
4. ☐ Notice of Informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-18 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-3, 6-10, 12-16 are rejected.

5. ☒ Claims 4, 11, 17, 18 are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).

10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.

12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

SN 814271

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 June 2003 has been entered.

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

The attempt to incorporate subject matter into this application by reference to U.S. Patent applications 40578, and 679783, respectively is improper because it has not yet been established as to whether the above cited applications have either been allowed or patent to permit proper incorporation by reference of "essential material".

Applicant is advised that should the above noted applications have not become allowed or patented before the indicated allowance of this application, it may be necessary to explicitly provide the "essential material" which is currently incorporated by reference in the present

application. Accordingly, this objection is held in abeyance until the status of any of the above cited application changes.

A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Okamura et al (of record).

Note that Fig. 19 discloses a strip-line circuit (4a, 4b, 4c, 4d) formed as a closed conductive loop (4) disposed on a multi-layer substrate structure (1) having multiple dielectric layers interposed with conductive loops at nodes are transmission lines (6, 7) which are arranged such that the conductive loop is divided into segments of different length which inherently provides segments of different impedance. Moreover, note that an inherent shunt capacitance is provided between the closed loop conductor (4) and the ground plane (5).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al and Takahashi et al taken in combination (both of record).

Takahashi et al (Fig. 8) discloses a filter (81) comprising at least two closed loop conductors (33) having input/output nodes with transmission line coupling (32, 83, 34).

As disclosed in Okamura et al, fig. 19 thereof, a closed conductive loop to effect a shunt capacitor with a ground electrode is provided.

Accordingly, it would have been obvious in view of the references taken together to have realized the filter of close conductive loop in Takahashi et al (fig. 8) to have been the specific configuration taught by Okamura (fig. 19). Such a modification would have been considered an obvious substitution of art recognized conductive loop structures, thereby suggesting the obviousness of such a combination.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al in view of Schmidt et al (both of record).

Schmidt et al discloses that an oxide superconductor is disposed on a lanthanum aluminate substrate to realize a filtering structure.

Accordingly the Okamura et al structure being realized as an oxide superconductor on a lanthanum aluminate substrate would have been obvious, especially since it would have imparted such low loss characteristics to such a configuration.

Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above rejection as applied to claim 14 above, and further in view of Schmidt et al (of record).

Likewise, for reasons set forth above, it would have been obvious to have further modified the above combination such as to have included the recited superconductor and dielectric material.

Applicant's arguments filed 30 June 2003 have been fully considered but they are not persuasive.

Applicant has argued with respect to Okamura et al (fig. 19) that the closed conductive loop in fig. 19 has insufficient capacitive reactance to provide for a shunt capacitor. That is to say, while such a loop provides some degree of capacitance to the ground reference, such capacitance is insufficient to provide a "shunt capacitor. Similarly, with respect to the obviousness combinations, it has been argued that there would have been no motivation "within any of those references themselves" to have combined the references to provide for the "shunt capacitor comprising a closed conductive loop" as claimed.

Contrary to applicant's assertion, it should be noted that Okamura et al does indeed explicitly teach that a shunt capacitance is effected by the structures disclosed therein. In particular, applicant's attention is directed to col 6, ls 21-27, which describes that a floating capacitance is mainly provided between electrode pattern (4) and earth electrode pattern (5). This is what is commonly characterized in the art as a "shunt capacitance". Although, this description pertains to the first embodiment (e.g. Fig. 2) of Okamura et al, such a principle clearly extends to the other embodiments (i.e. the closed loop in Fig. 19) in Okamura et al, since all embodiments share like structure, including an earth electrode (6). Moreover, as described at col 6, ls 30-32, it is described by changing the physical dimensions and characteristics of the dielectric and

conductive layers, the resonant frequency is changed. It should be noted that to be capable of changing a characteristic such a resonant frequency in the manner described is not insignificant. That is to say, a significant capacitance must exist to provide the requisite resonant frequency change. Additionally, at col 6, ls 35-40, reference is made to phrase "capacitance of the capacitor" as applied to the patterns (4, 5) and the dielectric layer therebetween. Finally, as described at col 6, ls 52-54, the resonator (including the shunt capacitor portion) is characterized as including a impedance (of which a capacitive reactance is a part thereof).

As for the obviousness combinations, it should be noted that the obviousness combination pertain to features other than the "shunt capacitance" effect. For example, with respect to Takahashi, the obviousness involves plural closed loop resonators forming a filter, and with respect to Schmidt, the obviousness pertains to the superconductive and dielectric materials. Applicant is reminded that it is not necessary that the references themselves suggest any combination, rather that the combination of references must suggest a motivation to combine the references. Moreover, as established in the preceding rebuttal, the Okamura et al does indeed provide a closed loop shunt capacitance, and thus that issue is not germane to the obviousness combination as set forth in the above rejections.

Claims 4, 11, 17, 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benny Lee whose telephone number is (703) 308 4902.

BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817

B. Lee

August 22, 2003